

In the Claims:

✓
Please cancel Claims 1, 3-5, 11- 24.

Please amend Claims 2, 6-8, 10, and 25-27, as shown below and in the attached
Replacement Sheets of Appendix B.

Please add New Claims 36-61, as shown below and in the attached Replacement Sheets
of Appendix B.

1. Cancel

2. ² (Amended) The safety system as in Claim ¹~~2~~[1], wherein said plurality of sensors comprises a sensor [adapted to sense equipment location at one of said stations] selected from the group consisting of: a sensor adapted to sense equipment location at one of said stations, a sensor adapted to sense equipment movement at one of said stations, a sensor adapted to sense location of people at one of said stations, a sensor adapted to sense movement of people at one of said stations, a door switch that signals the controller if a door is not closed, a wheelchair lift switch that signals the controller if a wheelchair lift is in use, an engine diagnostic sensor, a vehicle diagnostic sensor, a low tire pressure sensor, a low engine oil pressure sensor, an air brake air supply pressure sensor, a sensor that signals the controller if objects or people are close to the vehicle, a breath alcohol analyzer, and an access-code key-pad.

3. Cancel

4. Cancel

5. Cancel

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6. (Amended) The safety system of Claim 7[1], wherein the vehicle has an ignition switch, and wherein the controller has a positive power input adapted to be operatively connected to the ignition switch, so that opening the ignition switch shuts off power to the controller, which causes the management mechanism to apply the brake mechanism.

7. (Amended) A safety system for use with a brake mechanism of a vehicle, the safety system adapted to monitor conditions at a plurality of stations at the vehicle to determine whether vehicle movement should be permitted, the safety system comprising:
a management mechanism adapted to apply the brake mechanism to inhibit vehicle movement;

a plurality of sensors adapted to be at stations in the vehicle and adapted to sense conditions at the stations;

a solid-state controller operatively connected to the management mechanism and to the plurality of sensors, wherein the controller is adapted to receive signals from the plurality of sensors and, in response to signals from the plurality of sensors indicating a condition that is unsafe for vehicle movement, to actuate the management mechanism to apply the brakes. [The safety system of Claim 1,] wherein the management mechanism comprises a vented solenoid valve adapted to block and vent an air line in an air brake, wherein the blocking and venting of said air line applies the brake mechanism.

8. (Amended) A safety system for use with a brake mechanism of a vehicle, the safety system adapted to monitor conditions at a plurality of stations at the vehicle to determine whether vehicle movement should be permitted, the safety system comprising:
a management mechanism adapted to apply the brake mechanism to inhibit vehicle movement;

a plurality of sensors adapted to be at stations in the vehicle and adapted to sense conditions at the stations;

a solid-state controller operatively connected to the management mechanism and to the plurality of sensors, wherein the controller is adapted to receive signals from the plurality of sensors and, in response to signals from the plurality of sensors indicating a condition that is unsafe for vehicle movement, to actuate the management mechanism to apply the brakes. [The

safety system of Claim 1,] wherein the vehicle comprises a hydraulic master cylinder having a piston for increasing brake fluid pressure in a brake fluid line connected to a hydraulic brake mechanism, and a primary piston rod operated by a foot pedal in a driver's cab for powering the piston, wherein the management mechanism comprises a secondary piston rod in the master cylinder adapted to move the piston to increase hydraulic brake fluid in the brake fluid line, and an actuator for powering the secondary piston rod.

9. (Unchanged)

10. ⁶ (Amended) A safety system for use with a brake mechanism of a vehicle, the safety system adapted to monitor conditions at a plurality of stations at the vehicle to determine whether vehicle movement should be permitted, the safety system comprising:
a management mechanism adapted to apply the brake mechanism to inhibit vehicle movement;

a plurality of sensors adapted to be at stations in the vehicle and adapted to sense conditions at the stations;

a solid-state controller operatively connected to the management mechanism and to the plurality of sensors, wherein the controller is adapted to receive signals from the plurality of sensors and, in response to signals from the plurality of sensors indicating a condition that is unsafe for vehicle movement, to actuate the management mechanism to apply the brakes. [The safety system of Claim 1,] wherein the vehicle comprises a hydraulic master cylinder having a piston for increasing brake fluid pressure in a brake fluid line connected to a hydraulic brake mechanism, and a primary piston rod operated by a foot pedal in a driver's cab for powering the piston, the management mechanism comprising:

a secondary piston rod in the master cylinder adapted to move the piston to increase hydraulic brake fluid in the brake fluid line, and a spring biasing the secondary piston rod to apply the brake mechanism; and

a release unit counteracting the spring to release the brake, the release unit being controlled by the controller.

11. Cancel

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25. (Amended) A safety system for use with a brake mechanism of a vehicle, the safety system adapted to monitor conditions at a plurality of stations at the vehicle to determine whether vehicle movement should be permitted, the safety system comprising:
a management mechanism adapted to apply the brake mechanism to inhibit vehicle movement;

a plurality of sensors adapted to be at stations in the vehicle and adapted to sense conditions at the stations;

a solid-state controller operatively connected to the management mechanism and to the plurality of sensors, wherein the controller is adapted to receive signals from the plurality of sensors and, in response to signals from the plurality of sensors indicating a condition that is unsafe for vehicle movement, to actuate the management mechanism to apply the brakes, [The safety system of Claim 1,] wherein one of said plurality of sensors is a vehicle motion sensor, and wherein the controller does not actuate the management mechanism to apply the brake mechanism if the vehicle motion sensor signals the controller that the vehicle is moving above a certain speed.

26. (Amended) A safety system for use with a brake mechanism of a vehicle, the safety system adapted to monitor conditions at a plurality of stations at the vehicle to determine whether vehicle movement should be permitted, the safety system comprising:
a management mechanism adapted to apply the brake mechanism to inhibit vehicle movement;

a plurality of sensors adapted to be at stations in the vehicle and adapted to sense conditions at the stations;

a solid-state controller operatively connected to the management mechanism and to the plurality of sensors, wherein the controller is adapted to receive signals from the plurality of sensors and, in response to signals from the plurality of sensors indicating a condition that is unsafe for vehicle movement, to actuate the management mechanism to apply the brakes, [The safety system of Claim 1,] wherein the controller comprises a signal validation circuit that validates signals from the sensors for acceptance by the controller only if the signals arrive at the controller, uninterrupted, for a predetermined minimum duration of time [at least 1 to 2 seconds].

27. (Amended) A safety system for use with a brake mechanism of a vehicle, the safety system comprising:

a management mechanism adapted to apply a brake mechanism to inhibit vehicle movement;

a plurality of sensors adapted to be located at a plurality of stations in the vehicle and adapted to sense conditions at the stations;

a controller operatively connected to the management mechanism and to the plurality of sensors, wherein the controller is adapted to receive signals from the plurality of sensors and, in response to signals from the plurality of sensors indicating a condition that is unsafe for vehicle movement, to actuate the management mechanism to apply the brakes;

the safety system further comprising a vehicle motion override system comprising one of said plurality of sensors being a vehicle motion sensor, wherein the controller does not actuate the management mechanism to apply the brake mechanism if the vehicle motion sensor signals that controller that the vehicle is moving above a certain speed.

28 through 35. (Unchanged)

Please add New Claims 36-61, as follows:

36. The safety system as in Claim 8, wherein said plurality of sensors comprises a sensor selected from the group consisting of: a sensor adapted to sense equipment location at one of said stations, a sensor adapted to sense equipment movement at one of said stations, a sensor adapted to sense location of people at one of said stations, a sensor adapted to sense movement of people at one of said stations, a door switch that signals the controller if a door is not closed, a wheelchair lift switch that signals the controller if a wheelchair

lift is in use, an engine diagnostic sensor, a vehicle diagnostic sensor, a low tire pressure sensor, a low engine oil pressure sensor, an air brake air supply pressure sensor, a sensor that signals the controller if objects or people are close to the vehicle, a breath alcohol analyzer, and an access-code key-pad.

37. ¹⁹ The safety system as in Claim ~~10~~⁶, wherein said plurality of sensors comprises a sensor selected from the group consisting of: a sensor adapted to sense equipment location at one of said stations, a sensor adapted to sense equipment movement at one of said stations, a sensor adapted to sense location of people at one of said stations, a sensor adapted to sense movement of people at one of said stations, a door switch that signals the controller if a door is not closed, a wheelchair lift switch that signals the controller if a wheelchair lift is in use, an engine diagnostic sensor, a vehicle diagnostic sensor, a low tire pressure sensor, a low engine oil pressure sensor, an air brake air supply pressure sensor, a sensor that signals the controller if objects or people are close to the vehicle, a breath alcohol analyzer, and an access-code key-pad.

38. ²⁴ The safety system as in Claim ~~25~~⁷, wherein said plurality of sensors comprises a sensor selected from the group consisting of: a sensor adapted to sense equipment location at one of said stations, a sensor adapted to sense equipment movement at one of said stations, a sensor adapted to sense location of people at one of said stations, a sensor adapted to sense movement of people at one of said stations, a door switch that signals the controller if a door is not closed, a wheelchair lift switch that signals the controller if a wheelchair lift is in use, an engine diagnostic sensor, a vehicle diagnostic sensor, a low tire pressure sensor, a low engine oil pressure sensor, an air brake air supply pressure sensor, a sensor that signals the controller if objects or people are close to the vehicle, a breath alcohol analyzer, and an access-code key-pad.

39. ²¹ The safety system as in Claim ~~26~~⁸, wherein said plurality of sensors comprises a sensor selected from the group consisting of: a sensor adapted to sense equipment location at one of said stations, a sensor adapted to sense equipment movement at one of said stations, a sensor adapted to sense location of people at one of said stations, a sensor adapted to

sense movement of people at one of said stations, a door switch that signals the controller if a door is not closed, a wheelchair lift switch that signals the controller if a wheelchair lift is in use, an engine diagnostic sensor, a vehicle diagnostic sensor, a low tire pressure sensor, a low engine oil pressure sensor, an air brake air supply pressure sensor, a sensor that signals the controller if objects or people are close to the vehicle, a breath alcohol analyzer, and an access-code key-pad.

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40. The safety system as in Claim ⁹27, wherein said plurality of sensors comprises a sensor selected from the group consisting of: a sensor adapted to sense equipment location at one of said stations, a sensor adapted to sense equipment movement at one of said stations, a sensor adapted to sense location of people at one of said stations, a sensor adapted to sense movement of people at one of said stations, a door switch that signals the controller if a door is not closed, a wheelchair lift switch that signals the controller if a wheelchair lift is in use, an engine diagnostic sensor, a vehicle diagnostic sensor, a low tire pressure sensor, a low engine oil pressure sensor, an air brake air supply pressure sensor, a sensor that signals the controller if objects or people are close to the vehicle, a breath alcohol analyzer, and an access-code key-pad.

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41. The method of controlling brakes as in Claim ¹³31, wherein said plurality of sensors comprises a sensor selected from the group consisting of: a sensor adapted to sense equipment location at one of said stations, a sensor adapted to sense equipment movement at one of said stations, a sensor adapted to sense location of people at one of said stations, a sensor adapted to sense movement of people at one of said stations, a door switch that signals the controller if a door is not closed, a wheelchair lift switch that signals the controller if a wheelchair lift is in use, an engine diagnostic sensor, a vehicle diagnostic sensor, a low tire pressure sensor, a low engine oil pressure sensor, an air brake air supply pressure sensor, a sensor that signals the controller if objects or people are close to the vehicle, a breath alcohol analyzer, and an access-code key-pad.

²⁴ 42. The safety system of Claim ⁸26, wherein said predetermined minimum duration of time is in the range of 1 to 2 seconds.

²⁵ 43. The safety system of Claim ⁸26, wherein said predetermined minimum duration of time is in the range of 0.5 to 1.25 seconds.

²⁶ 44. The safety system of Claim ⁷25, wherein said management mechanism is adapted to apply a brake mechanism selected from the group consisting of: an air-actuated brake mechanism, a hydraulic-oil-actuated brake mechanism, a spring-actuated brake mechanism, an electrically-actuated brake mechanism, and a mechanically-actuated brake mechanism.

²⁷ 45. The safety system of Claim ⁸26, wherein said management mechanism is adapted to apply a brake mechanism selected from the group consisting of: an air-actuated brake mechanism, a hydraulic-oil-actuated brake mechanism, a spring-actuated brake mechanism, an electrically-actuated brake mechanism, and a mechanically-actuated brake mechanism.

²⁸ 46. The safety system of Claim ⁹27, wherein said management mechanism is adapted to apply a brake mechanism selected from the group consisting of: an air-actuated brake mechanism, a hydraulic-oil-actuated brake mechanism, a spring-actuated brake mechanism, an electrically-actuated brake mechanism, and a mechanically-actuated brake mechanism.

²⁹ 47. The method of controlling brakes of Claim ¹³31, wherein said management mechanism is adapted to apply a brake mechanism selected from the group consisting of: an air-actuated brake mechanism, a hydraulic-oil-actuated brake mechanism, a spring-actuated brake mechanism, an electrically-actuated brake mechanism, and a mechanically-actuated brake mechanism.

48.³⁰ The safety system of Claim 7, further comprising a manually-operated operator switch electrically connected to the controller, said operator switch being movable by the operator to an activate position directing the controller to apply the brake mechanism, and said operator switch being movable to a release position directing the controller to release the brake mechanism if said sensors no longer signal any unsafe condition to the controller.

49.³¹ The safety system of Claim 8, further comprising a manually-operated operator switch electrically connected to the controller, said operator switch being movable by the operator to an activate position directing the controller to apply the brake mechanism, and said operator switch being movable to a release position directing the controller to release the brake mechanism if said sensors no longer signal any unsafe condition to the controller.

50.³² The safety system of Claim 10, further comprising a manually-operated operator switch electrically connected to the controller, said operator switch being movable by the operator to an activate position directing the controller to apply the brake mechanism, and said operator switch being movable to a release position directing the controller to release the brake mechanism if said sensors no longer signal any unsafe condition to the controller.

51.³³ The safety system of Claim 25, further comprising a manually-operated operator switch electrically connected to the controller, said operator switch being movable by the operator to an activate position directing the controller to apply the brake mechanism, and said operator switch being movable to a release position directing the controller to release the brake mechanism if said sensors no longer signal any unsafe condition to the controller.

52.³⁴ The safety system of Claim 26, further comprising a manually-operated operator switch electrically connected to the controller, said operator switch being movable by the operator to an activate position directing the controller to apply the brake mechanism, and said operator switch being movable to a release position directing the controller to release

the brake mechanism if said sensors no longer signal any unsafe condition to the controller.

53. ³⁵ The safety system of Claim ¹²27, further comprising a manually-operated operator switch electrically connected to the controller, said operator switch being movable by the operator to an activate position directing the controller to apply the brake mechanism, and said operator switch being movable to a release position directing the controller to release the brake mechanism if said sensors no longer signal any unsafe condition to the controller.

54. ³⁶ The method of controlling brakes of Claim ¹³31, further comprising switching a manually-operated operator switch, that is electrically connected to the controller, to a release position directing the controller to release the brake mechanism if said sensors no longer signal any unsafe condition to the controller.

55. ³⁷ The safety system as in Claim ¹7 that is for use with a parking brake mechanism of a vehicle, wherein the management mechanism is adapted to apply the parking brake mechanism when the vehicle is parked to inhibit vehicle movement.

56. ³⁸ The safety system as in Claim 8 that is for use with a parking brake mechanism of a vehicle, wherein the management mechanism is adapted to apply the parking brake mechanism when the vehicle is parked to inhibit vehicle movement.

57. ³⁹ The safety system as in Claim ⁶10 that is for use with a parking brake mechanism of a vehicle, wherein the management mechanism is adapted to apply the parking brake mechanism when the vehicle is parked to inhibit vehicle movement.

58. ⁴⁰ The safety system as in Claim ⁷25 that is for use with a parking brake mechanism of a vehicle, wherein the management mechanism is adapted to apply the parking brake mechanism when the vehicle is parked to inhibit vehicle movement.

59. ⁴¹ The safety system as in Claim ⁴26 that is for use with a parking brake mechanism of a vehicle, wherein the management mechanism is adapted to apply the parking brake mechanism when the vehicle is parked to inhibit vehicle movement.
60. ⁴² The safety system as in Claim ⁹27 that is for use with a parking brake mechanism of a vehicle, wherein the management mechanism is adapted to apply the parking brake mechanism when the vehicle is parked to inhibit vehicle movement.
61. ⁴³ The method of controlling brakes as in Claim ¹³31 that is for controlling a parking brake mechanism of a vehicle, wherein the management mechanism is adapted to apply the parking brake mechanism when the controller responds, to signals from the plurality of sensors indicating an unsafe condition, by actuating a management mechanism that applies the vehicle parking brake to prevent the vehicle from moving from a parked position.

REMARKS

Applicants request reconsideration and further examination of this application.

In response to the objection regarding the Abstract, Applicants hereby amend the Abstract as shown above, and as included as a Replacement Sheets in Appendix A. No new matter is added.

Applicants appreciate the allowance of Claims 31-35, and the indication that Claims 7, 8, 10, 25, 26, 27-30 would be allowable if rewritten to correct any objections, any applicable rejections, under 35 U.S.C. 112, and to include all the limitations of the base claims and any intervening claims. In response, the Applicants have made the following amendments:

Claims 1, 3-5, 11-24 have been canceled. The limitations of Claims 3-5 and 14-23 have been incorporated into amended Claim 2 as part of a Markush Group, and Claim 2 has been made dependent upon Claim 7.